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N. E. FARMER.

VEGETABLE PHYSIOLOGY AND THE CULTURE OF FOREST TREES.

The following correspondence, which we have been permitted to publish, contains some interesting facts in relation to Vegetable Physiology and the culture of forest trees.

Hampden, Penobscot Co. Maine.
May 14, 1838.

GENERAL DEARBORN,

DEAR SIR—Having been much instructed by your letters on planting forest trees, recently published by a committee of the citizens of Bangor, who are at this moment, you know, all alive to the subject, it has occurred to me that I may venture without any especial introduction, to communicate to you the details of some very recent observations in relation to the form and growth of our forest trees, which I believe to be new, and possibly entitled to a more extended examination than may be made on this or any other single position, assured that, if nothing interesting shall be found in them, I may find an apology for the trouble of this letter in the motive which has induced it.

The fact that the trunks of our trees, especially the lower portions of them, are not cylindrical, but elliptical is, I suppose, familiar with every one in this timber growing, and timber cutting country.

But that these ellipses are *parallel with each other*, and that this form and this arrangement are not the consequences of accident, or of local and partial, but of causes constant and uniform in their operation, are truths, which, as far as I know, have thus far escaped the notice of horticulturists and others curious in these matters.

Measuring last week, a row of Elms planted in 1820, for the information of a friend in Bangor, I observed that the trunks were not only elliptical, for this I had frequently noticed, but that the ellipses were parallel, and that the course of the longest diameter was about 30° to 33° east of south and west of north, on the true meridian, and that the southeasterly curve was the *quickest* or more elongated than that on the opposite side.

As the form of these trees might possibly be affected by their too close, or crowded positions, in the row which is east and west, I proceeded to measure a large number of trees of various kinds, some of them standing in open ground, others in a thick grove, and others on the margin of the thick wood with open ground on one side only. In these various situations, the trees were taken promiscuously rejecting only such as were misshaped by accident. No difference material to the principle could be perceived, either in the form or in the direction of the ellipses.

It is important here to remark that the largest roots and most thrifty branches are evidently disposed with reference to the longest diameter of the ellipsis—the strongest and most extended of these to the southeastward.

The form of the trunk, then, is very clearly referable to the disposition of the principal roots and branches and is a necessary consequence of the reciprocal action of these upon each other. But why this peculiar and uniform disposition of the roots and branches, is an enquiry not so readily answered. And should it be deemed worthy any farther pursuit, I beg that the following circumstances may be kept in view.

The line of the ellipses is nearly perpendicular to the line of the sea coast. It is also nearly in a line with our most violent southeasterly winds, and not many degrees from that of our northwesterly.

It is a very familiar fact that our rivers and water courses have a decided influence upon the trees in their vicinity, inducing an unusually abundant and vigorous vegetation on the water side. How far the humidity of the sea, combined with the general warmth of the morning sun, may influence *one side* of trees, at a distance of 20 or 30 miles, I will not undertake to conjecture, but while I do not presume to give any precise value to this circumstance, I think it worth keeping in view in any farther investigation, till farther observation shall determine.

That the strong winds alluded to, by constantly, or very frequently, agitating the tree and trying its strength, should induce corresponding efforts to resist their force and to extend its supports, enlarge its trunk in the line of assault, and lessen the volume of branches and foliage in the lateral directions, so as to present the least possible surface to the action of the assailant. All this is very intelligible because it is in accordance with the uniform operations of nature. But if this were the sole cause of the phenomena in question, it were difficult to understand why these arrangements should not conform more exactly with the almost uniform current of these winds. If however the causes suggested shall be found to unite their slightly varying forces to produce the effects, it will be seen that they respectively modify without overcoming each other. The direction of the ellipses, is in a line inclining from the perpendicular of the coast, towards the line of the S. E. and N. W. winds, but coincident with neither.

Most respectfully, Sir,
Your very obedient servant,
JEDEDIAH HERRICK.

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This table shows the greatest, the least, and the average difference of diameter in the order expressed, the difference being a proportion of the longest diameter.

20 Elms,	1-5	1-28	1-11	of the	longest	diameter.
15 Oaks,	1-7	1-30	1-15	"	"	"
9 Firs,	1-6	1-46	1-25	"	"	"
4 Birches,	1-5	1-9	1-7	"	"	"
4 Baswood,	1-5	1-11	1-7	"	"	"
3 Beaches,	1-8	1-12	1-10	"	"	"
3 Hemlocks,	1-12	1-18	1-15	"	"	"

4 other Hemlocks were found to be nearly cylindrical.

Hawthorn Cottage,
Roxbury, May 16, 1838.

DEAR SIR—I am extremely obliged to you, for the very interesting facts, which you have so kindly communicated, in relation to the contour of the trunk and the extension of the branches and roots of forest trees. They were new to me, and I do not recollect to have seen any allusion, in the works on botany and vegetable physiology, to the elliptical form of the cross section of the main stem, which from the statement you have made, appears to be universally the case, and to have been long and generally known, to the "timber-cutting" citizens of Maine. The cause of that peculiarity seems, however, to be sufficiently apparent. You state, that the longest diameter of the ellipse is in a direction from north 30° to 33° west, to south 30° to 33° east; and that the branches and roots, as well as the elliptical section of the tree are elongated, in a southeasterly direction.

Now, it has been established, by experiment, that a south-easterly exposition is the most eligible for the fronts of green-houses, as that affords the best opportunity to the plants, for receiving the earliest morning rays of the sun, and for enjoying them for the longest period, and especially, at those seasons of the year, when their vivifying influence is most required and congenial. The line, therefore, which has been found preferable to all others for the facade of green-houses, or the direction of such walls, as are intended to favor the growth of fruits and other vegetables, is very nearly perpendicular to that, which nature, it seems, has so remarkably indicated, from the manner in which forest trees are disposed to extend their vegetation.

Every person who has resided in the country must have observed, that on the south-easterly slopes or sides of hills, embankments, ponds, rivers, streams, buildings, and close fences, vegetation commences sooner in the spring and is more actively kept up during the season, than in any of the other exposures.

But there is another cause, besides the more direct effect of the solar heat, which powerfully aids vegetation, in such positions,—the protection afforded by the various artificial and natural barriers that have been reared, against the cold and blighting north west winds, which have such a deleterious effect on all kinds of plants, as well as rendering our winters so terrifically rigorous, our springs so backward, our autumns so premature, and so many days, of even our summers too cold for the complete fructification and maturity of nearly all the vegetable productions, which are objects of attention to the farmer and horticulturist. The vast regions of perpetual ice and snow, which extend from the pole towards the borders of the United States, with the mighty range of the Rocky mountains, towering into the heights of uninterrupted congelation, and the lateness of the period when the ice and snow disappear from the great lakes, and immense forrests, reaching within even our own bounds, have a direct and powerful tendency to render the northwestern wind, the most prevalent, at least, through-

out New England, and all the states and territories which extend westward, from the Hudson, to the base of the Rocky mountains; and which are so fatal to the hopes and labors of the cultivators of the soil. The latter therefore have endeavored to guard against their withering and destructive ravages, by structures of various kinds, as well as to invite the first beams of the sun, to smile upon their cherished families of the vegetable realm.

Have not the forest trees made a like effort and are not the results in harmony with these well established principles? Vegetable physiology has made great progress within the last half century; and more recently, the laws by which it is regulated, have been clearly illustrated, by numerous experiments in England, France and Switzerland. A tree is now considered, by the most able and distinguished writers on this subject, either as an *aggregate* of as many *distinct plants*, as there are *buds* on its branches, or as *one being*, analagous to what is called, when speaking of animals, an *individual*; but in both cases, the mode of nutrition and increment is the same. The elementary substances being liquified are conveyed in the sap through the alburnum, and exposed to the light, air and heat of the sun, on the upper surface of the leaf, where are exhaled those vapors and gases which are not conducive to the health, or support of the plant, and others elaborated, or inspired from the atmosphere indispensable to the formation of wood, bark, fruit, gums, rosins, oils, aromas and saccharine or other matter peculiar to the several species, which are transmitted by the returning circulation, that commences on the inferior side of the leaf, and descends in such a manner in the cortex, as to create through the medium of the cambium, all the ligneous and other parts and substances, which have been named.

As these vessels, which like the arteries and veins in animals, conduct the sap, from the spongioles of the roots to the highest leaf, and bark through the cortex, are separate and independent, for each bud, throughout the whole extent of the tree, as so many isolated plants, those which are most favorably situated for receiving the earliest and greatest portion of heat and light, will be the soonest in active operation, and continue to exercise their functions, for the longest time, during each day and from the dawn of spring, until the autumnal frosts terminate all vegetation in the foliage; consequently the roots and branches, as well as the side of the trunk, on which those vessels are arranged, will increase faster and for a longer period, and thus produce results, which you have actually verified. Besides the trunk of the tree is, itself, a thick and impervious wall to protect the sap vessels and other parts of vegetation, of each bud belonging to the south eastern side of the tree from the blasting winds of the north west,—while it is also a vast combination of delicate pipes which are constantly conducting heat from the earth—that grand and inexhaustible reservoir of caloric, and distributing it throughout the whole mass, and to the end of the minutest twig, whenever the temperature of external air is below that of the earth, or the surface of the latter is frozen, but not so deep, as to reach the extremities of all the roots.

The theory I have attempted to establish has been based on the facts presented in your letter, and the practical operations of the cultivators of the earth, as well as the accredited principles of vegetable physiology, the known effects of heat, light and air on plants, the characteristics of our climate and the general laws of nature in all her wonderful works; but whether it affords a satisfactory explanation of the phenomenon, which you have been the first to announce, I am not sufficiently confident to affirm; and have presented it, rather with the hope, that others, more competent, may be induced to make greater researches, and give the subject that thorough examination which it so eminently merits.

I am ever highly gratified in becoming acquainted with those, who have a love for trees and a taste for their cultivation; it is therefore pleasing to have commenced a correspondence, on a subject of such congenial interest.

In a country so eminently favored as this, by the vast number of the beautiful and magnificent varieties of trees which embellish our forests, compared with those which are indigenous to Europe, it is not a little surprising, that a deeper interest has not been developed, for rendering them tributary to the health, comfort and pleasure of the people, by considering them as indispensable to the completeness of a country residence and the public edifices, squares, grounds and highways, as are any of the appendages, which are deemed useful, ornamental or agreeable in either.

It is time that some portion of the population should begin to plant, and foster trees, and not all continue united with those, who are for the indiscriminate destruction of our superb native groves. When I resided on the banks of the Kennebeck river, as a boy, the county of Kennebeck was as much a wilderness and lumbering region, as any on the waters of the Penobscot river; but so reckless and wide spreading has been the devastation of every variety of tree, and in which work of repentance, the farmers have been so actively conspicuous, that many of them are now obliged to go many miles for their fuel, and pay a high price for it. These lessons of sad experience should not be neglected; and the gentlemen of Bangor, who have with such commendable zeal, formed an association for ornamenting that young and thrifty city, with trees, appear determined to leave honorable memorials, that they have not been either heedless of the errors of the past generations, negligent of the interests of the present, or indifferent to those of the future.

Such demonstrations of an enlightened and munificent public spirit are worthy of all praise; and may their meritorious example induce the citizens of all our towns, to exclaim, with the determined energy of the venerable Evelyn, "LET US ALSO RISE UP AND PLANT."

With great esteem,
Your most obedient servant.
H. A. S. DEARBORN.

J. HERRICK, ESQ.

(From the Farmer's Cabinet.)

POULTRY.

The rearing of poultry produces much profit on a small investment.

Those who increased their stock of poultry during the last year, have been reaping a rich reward in return for their increased attention to this interesting branch of domestic economy. It has brought a very generous price, and eggs have not been less liberally paid for. Many chubby boys and rosy cheeked girls have often had their heart made glad, when "father" has returned from market, and announced the grand price for which he sold the turkeys, the ducks, the chickens and the eggs; for there is in many farmers' families a perquisite arising from sales of this description of stock, which enures to the younger branches of the family as a reward for their ingenuity, care and industry, in attending to the rearing and protecting the poultry, and an encouragement to future good conduct and obedience.

The multitude of grass-hoppers which inundated the country last summer, with myriads of other insects, furnished an abundant supply of meat for the fowls without apparently reducing the supply of it, and there was but little necessity for giving them other descriptions of food during the season. A farmer who regularly attends market, sold during the last year poultry and eggs to the amount of about one hundred and fifty dollars, and the expense incurred in their production was so small as scarcely to be appreciable; this should encourage others to do likewise, and they will have their reward proportionate to their works.

Guinea fowls make an agreeable variety in a poultry yard, and they furnish more eggs than common hens; they sell well in market without being picked, and their vigilance in guarding against danger, and the great alarm they sound when it approaches, so terrifies the hawk, that he rarely ventures to pounce on a chicken when guinea fowls are in the vicinity. Some people rear and keep them on purpose to guard the poultry from the depredations of their enemies, and it is thought they find their interest promoted by it. Rome was once preserved, it is said, by the noise made by geese producing an alarm amongst the inhabitants in time to preserve them from their enemies, who were approaching. The writer of this recollects a case that occurred many years since of a barn being preserved from being fired by an incendiary, by a flock of geese, which were aroused from their slumbers by him as he was about to execute his vile purpose: this was afterwards testified to by an accomplice in the intended mischief. I state these facts in order to let young people know that geese have been of some use in the world besides furnishing us with good feather beds, and quills to make pens.

Those who design to profit by rearing poultry the approaching season, should give attention to it early in the spring and follow it up with vigilance and care until the young ones are well feathered, when they will require but little attention. There should be always a shelter provided for fowls whether they be old or young, and those farmers who are destitute of proper winter quarters for their poultry should not let another season pass by without making suitable provision to protect them from the inclemency of the weather; for with proper winter protection eggs would be abundant all the year, and what pays a better profit than eggs?

OVA.

(From the Review of "Loudon's Arboretium, in the London Quarterly.)

By the far greater part of Mr Loudon's work consists of what may be called a descriptive catalogue of all the trees and shrubs which will grow in the open air in Britain, illustrated by engravings on wood. This catalogue is arranged according to the natural system, beginning with the *Clematis*, and other ligneous plants of the order *Ranunculaceæ*, and taking in succession all the other orders which contain either trees or shrubs. According to this arrangement, one of the first trees described it the *Evergreen Magnolia*, so well known for the splendor and fragrance of its blossoms. This fine tree appears to have been first brought to Europe, from the banks of the Mississippi, in 1732, by a French officer of marines, who planted it in his native place, Maillardiere, about four miles from Nantes.

Here the *Magnolia* grew and flourished; but its introducer having died, little notice was taken of it, and when observed, it was supposed to be only some variety of the common *Laurel*, which it resembled in its leaves. Thirty years afterwards it flowered, and was then discovered by M. Bonami, professor of Botany at Nantes, to be the *Magnolia Grandiflora* of Linnæus. At a meeting of the states of Bretagne, held at Nantes in September, 1760, M. Bonami presented a branch of this *Magnolia* in flower to the Princess de Rohan Chabot, —and it excited so much admiration that its fame shortly after reached the ears of Louis XV. The monarch was then ornamenting his garden at the Petit Trianon, and had there some small plants of the *Magnolia Grandiflora*, which had in the mean time been re-introduced into Europe by one of the English collectors; and when Louis heard that he had in his own dominions a tree of this rare exotic 40 feet high, which was covered with blossoms every year, he sent two of his gardeners to examine it, with orders to transport it to Versailles, if they could ensure its living. This *if* was a formidable obstacle; and the gardeners reporting that they feared it would not survive its removal, it was suffered to remain at Mailladiere. Thirty years more brought the Revolution, and amidst the general destruction even the poor *Magnolia* did not escape; it was mutilated in the war of La Vendee, and its branches cut for fire-wood; the house near which it stood was afterwards burnt down, and the magnolia was scorched and withered by the flames. It partially recovered, and still survives, though now only the wreck of what it was.

In this manner Mr Loudon proceeds to mingle anecdotes of celebrated trees with his descriptions of the genera to which they belong; and there is scarcely a genus from which a similar extract might not be made.

In his chapter on the *Lime-tree*, Mr Loudon mentions one at Knowle, which covers nearly a quarter of an acre. The vast lower branches have rested their extremities on the soil, rooted into it, and sent up a circle of young trees, surrounding the parent. The outer branches of these in their turn stretch out, rest upon the ground, and take root, forming a second circle of trees, from 30 to 40 feet high, and their outer branches again are beginning to dispose themselves so as to form a third circle. This very remarkable tree stands on a lawn in an ancient geometrical garden, and must be at least two centuries old;—the soil is a deep sandy loam. The largest *Lime-Tree* in England is that in Moor Park, Hertfordshire, now the property of the Marquis of Westminster: it is 100 feet high, with a head 122 feet in diameter, divided into nineteen immense limbs. There are many very curious *Lime-Trees* on the continent, one of which, at Neustadt on the Linde, has a trunk 54 feet in girth with several enormous branches, which are supported on 108 pillars. In the centre of the tree is a kind of summer-house, which is reached by a flight of steps. In the hollow of the branches earth has been placed, and gooseberry bushes have been planted, the fruit of which is sold to visiters.

When speaking of the different kinds of willows, Mr Loudon gives the history of the *Weeping willow*, which was first known in Europe, by its being introduced in "A View of the Village of Tonnan, drawn by John Nicohoff, July 3, 1655, on his way to Pekin, with the embassy which the Dutch sent to the Emperor of China in that year." Pope is generally said to have first introduced the weeping willow into England; but this, Mr Loudon informs us, cannot be strictly correct, as it is included in a catalogue of British trees, published in 1692. The story respecting Pope is, that he, "happening to be with Lady Suffolk, when that lady received a present from Spain, or, according to some, from Turkey, observed that some of the pieces of withy bound round it appeared as though they would vegetate; and taking them up, said, 'Perhaps these may produce something that we have not in England.' Whereupon, he planted one of them in his garden at Twickenham. Which became the weeping willow there, afterwards so celebrated."

Napoleon's willow is a variety of the *common Weeping Willow*. It appears that the willow is not indigenous to St. Helena; but that, when General Beatson was Governor in that island, he introduced it among a great number of other trees and shrubs from England.

"He had the greatest difficulty in preserving his plantations from the numerous goats which abounded in the island; yet several of the trees survived, and attained a timber-like size. Among these was the tree of *Salix Babylonica*, which has since been called Napoleon's Willow. This tree grew among other trees, on the side of a valley near a spring; and, having attracted the notice of Napoleon, he had a seat placed under it, and used to go and sit there very frequently, and have water brought to him from the adjoining fountain. About the time of Napoleon's death, in 1821, a storm it is said, shattered the willow in pieces; and, after the interment of the emperor, Madame Bertrand planted several cuttings of this tree on the outside of the railing which surrounds his grave; and placed within it, on the stone, several flower pots, with hearts-ease and forget-me-not. In 1828, we are informed, these willows were found in a dying state, and twentyeight young ones were, in consequence, placed near the tomb, which was at that time surrounded with a profusion of scarlet-blossomed Pelargoniums. A correspondent, who was at St, Helena in 1834, says one of the willows was then in a flourishing condition; but another, who was there in 1835, describes it as fast going to decay, owing to the number of pieces carried away by visitors. In what year a cutting of this willow was brought to England for the first time, we have not been able to ascertain; but it appears probable that it may have been in the year 1823, and that one of the oldest plants is that in the gardens of the Roebuck tavern on Richmond Hill, which as it appears by a white marble tablet affixed to it, was taken from the tree in that year. Since that period it has become fashionable to possess a plant of the true Napoleon's Willow; and, in consequence, a great many cuttings have been imported, and a number of plants sold by the London nurserymen."

The famous tree near Lichfield, long known as "Johnson's Willow" (*Salix Russelliana* Smith,) is generally supposed to have been planted by Dr Johnson; but in fact the tree had attained a large size when the Doctor was a young man. He tells us himself that "it was the delight of his early and waning life," and he never failed to visit it whenever he went to Lichfield. The tree was measured by the Doctor's desire in 1781, when it was supposed to be nearly a century old, and the circumference of its branches was upwards of 200 feet. It stood near the foot path between the city and Stow Hill, the residence of "Molly Ashton;" and we well remember its venerable appearance.

Of the Oak, its uses and value.—"Any Oak in a good soil and situation," says South a practical planter, "will in seventyfive years from the acorn contain a ton of timber, or a load and a half of square timber. The same Oak at one hundred and fifty years of age will contain about eight tons of timber, or twelve loads of square timber." By the report of the Commissioners of Land Revenue respecting Timber, printed by order of the House of Commons, it appears that a 74 gun ship contains about 2,000 tons, which, at the rate of a load and a half to a ton, would give 3,000 loads of timber; and would consequently require 2,000 trees of seventyfive years' growth, or 250 of one hundred and fifty years' growth. It has also been calculated that, as not more than forty Oaks, containing a load and a half of timber in each can stand upon an acre, fifty acres are required to produce the Oaks necessary for every 74 gun ship. In plantations made for profit, few Oaks are allowed to stand more than from seventyfive to one hundred, or at most one hundred and fifty years, and the above are the average dimensions of Oaks at the first and last of these ages; the first being, as we have already observed, that at which Oak trees are usually cut for ship-building. Instances are, indeed, on record, of remarkable Oaks producing from thirty to forty, and sometimes even fifty tons of timber each; but these trees must have been the growth of centuries. In the mansion at Tredegar Park, Monmouthshire, there is said to be a room fortytwo feet long and twentyseven feet broad, the floor and wainscot of which were the produce of a single Oak tree grown on the estate.

The oldest oak in England is supposed to be the Parliament Oak, (so called from the tradition of Edward I. holding a Parliament under its branches,) in Clipstone Park, belonging to the Duke of Portland: this park being almost the most ancient in the island. It was a park before the conquest, and seized as such by the conqueror. The tree tree is supposed to be 1500 years old. The tallest oak in England was the property of the same nobleman—it was called *Duke's Walking Stick*—higher than Westminster Abbey—and stood till of late years. The largest oak in England is the Calthorpe Oak, Yorkshire; it measures seventyeight feet in circumference, where the trunk meets the ground. The *Three Shire Oak* at Worksop, was so called from covering parts of Yorkshire, Nottingham, and Derby: it had the greatest expanse of any recorded in this island, dropping over 777 square yards. The most productive oak was that of Gelonos, in Monmouthshire, felled in 1810. Its bark brought 200*l.* and its timber 670*l.*

Massachusetts Horticultural Society.

Saturday, Feb. 16, 1839.

EXHIBITION OF FRUITS.

B. W. French, Esq. exhibited the following apples: American Nonsuch, Ortley, and Newtown Pippin.

Samuel Downer, Esq., exhibited beautiful specimens of the Baldwin and Newtown Pippin Apples.

Samuel Walker, Esq., exhibited the American Nonsuch Apples.

Enoch Bartlett, Esq., exhibited the Winter Pearmain, and Rhode Island Greening Apples.

Mr Manning exhibited the yellow Bellflower, and Woolman's Long Pippin Cox No. 124.

Mr George Newhall again exhibited a basket of Isabella Grapes, in fine order. We are informed by this gentleman that he preserves them in good condition during the winter, by packing them in cotton, in jars closely covered.

For the Committee. ROBERT MANNING.

(From the Genesee Farmer.)

DICTIONARY OF TERMS USED IN AGRICULTURE,

AND IN THE SCIENCES MOST INTIMATELY CONNECTED WITH ITS ADVANCEMENT.

(Continued.)

Aquatic. Plants that live and flourish in the water are termed aquatic. There are also aquatic animals and birds. All our lakes, rivers and the ocean, furnish specimens of aquatic plants, some of which are of great use and value. A large part of the soda of commerce is obtained from a sea weed, which, drifted ashore, is dried and burned for the soda of the ashes. Hundreds of square miles in the equatorial Atlantic, at some seasons of the year, are covered with this marine vegetation. Some sea weeds, as the algæ, that grow as they float in the water, attain a length of several hundred feet. The rice plant of the East Indies and the Carolinas, is an aquatic plant, and probably contributes as much to human subsistence as any plant on the globe. The wild rice, *Zizania aquatica*, of our northern lakes and rivers, is of great service to the native tribes of those regions, feeding the immense quantities of water fowls of all kinds that visit and breed in those inhospitable climes, as well as furnishing food to the natives themselves when their usual supplies from other sources fail them. The flags, rushes, and other grasses that grow in the waters of the lakes, or other quiet waters, the pond lily, &c. are further examples of aquatic plants.

Argillaceous. A term applied to soils in which clay forms a principal ingredient. It was derived from *argil* or clayey, as aluminous from alumine. In agriculture, argillaceous and aluminous are words of the same import, and mean soils or earth in which clay predominates. "*Analysis*" shows how the proportion can be determined.

Artesian. A kind of well made by boring through the successive strata of the earth until water is found. This name is derived from Artois in France, where the system of boring was first successfully adopted. By penetrating the rocky crust of earth in this way, the water frequently rises to the surface, and flows a living stream; in other cases it rises so as to be obtained without difficulty. In this country wells have been bored to the depth of a thousand feet, and those of 500 or 700 are not uncommon. Various products are obtained from the earth in this way. In Albany a valuable mineral spring has been reached by boring. The great quantities of water at the Kenhawa salines are obtained from Artesian wells. Springs of carbonated hydrogen, that burn with a perpetual flame; and immense reservoirs of petroleum, (the Seneca oil of commerce) have been discovered while boring for salt or for fresh water. Artesian wells have been sunk in the deserts between Cairo and Suez, and abundant supplies of water obtained; and wherever the borings have been properly and perseveringly conducted, either in this or foreign countries, water has usually been procured.

Artichoke. Two plants of this name are cultivated for food; the first *Cyanra scolymus*, is chiefly cultivated in Europe for culinary purposes. The part that is eaten is the receptacle of the flower, divested of the unopened florets, and the bristles that separate them. The head thus prepared is boiled plain and eaten with melted butter and pepper, and is deemed wholesome and nutritious. These *bottoms*, as they are termed, are also made into a variety of dishes, stewed and highly seasoned. The other plant, is the one known as the Jerusalem artichoke, *Helianthus tuberosus*, and is cultivated for the root alone. It is a species of sunflower, grows wild in several parts of South America, and the root is potato shaped. The roots are valuable as a food for animals, and are not unpalatable to man. They are found in most of our gardens, an improper place for them, as they are apt to spread, and are somewhat difficult to eradicate. In this country few attempts have been made at their field culture, but those have been profitable. In highly cultivated grounds in England and Holland, they have been found extremely productive, 70 or 80 tons of the roots having been gathered from a single acre. Their flavor is much like that of the former artichoke, when boiled and prepared for the table, and they are very valuable for feeding hogs and store pigs.

(To be continued.)

(From the Farmer's Cabinet.)

PLANTING TREES.

Those who won't dig must beg, and those who won't plant should not be permitted to partake of the fruits of other men's planting.

All of us have partaken of the fruits of the labors of those who have preceded us, and we are all under obligations to render some service to those who may succeed us.

The labor and expense of planting and rearing a few fruit and ornamental trees, and shrubs, is so trifling, that no one would suppose that the most indolent and penurious person in the community could be deterred by it from procuring and setting out a dozen or more the ensuing spring.

There is a pleasure and satisfaction connected with the performance of such a duty as this, which furnishes an ample compensation for the expenditure of muscle and money, independent of any benefit to be hereafter derived from it.

No person, it is believed, ever planted a fruit tree, or grape-vine, without feeling a secret consciousness that he had rendered a service of an important character either to his own family, or to others that might come after him.

It is the peculiar characteristic of the truly pious and good, to take pleasure in promoting and increasing the comfort, the happiness and the interests of their fellow men.

"There is no part of husbandry which is more commonly neglected than that of planting trees, without which they can neither expect fruit, ornament or delight from their labors. But they seldom do this till they begin to grow wise, that is, till they begin to grow old, and find by experience the prudence and necessity of it. When Ulysses, after a ten years absence, was returned from Troy, and found his aged father in the field planting trees, he asked him, 'Why, being now so far advanced in years, he would put himself to the fatigue and labor of planting that, of which he was never likely to enjoy the fruit.' The good old man, taking him for a stranger, gently replied, 'I plant against my son Ulysses comes home.' The application is obvious, and instructive both to young and old."

Determine now without delay the trees and shrubs you will set out in the spring, ascertain where the best and handsomest can be obtained, and suffer no ordinary circumstances to prevent you from executing so important a determination, as that of doing some good in the world before you are called upon to give up your stewardship, which may possibly be before another annual period for planting trees comes round.

Let parents encourage their children, and children plead with their parents, to progress with the good work of planting fruit and ornamental trees, shrubs and vines, as soon as the spring opens; and then our farms and farm houses will soon exchange that dull, comfortless aspect, which is so obvious in many places, for a more cheering and exhilarating exhibition of the fruits of industry, care and good taste, and travellers as they pass by will enquire,

Who dwells in this delightful place
Distinguished for its perfect grace?

R.

(From the Albany Cultivator.)

CUTTING CORN STALK FODDER — THE GRUB WORM — DOCTORING FRUIT TREES—ROOT CULTURE.

Williamstown, Mass. Dec. 20th, 1838.

HON. J. BUEL—Dear Sir—I have not the happiness either to bear the honorable title, or to share the enviable labors, of the *professional farmer*: yet having been accustomed in early life to the occupations of the field, for which I still retain a relish, and having made it for several years my relaxation to supervise the general conduct of a little farm, whose details are carried out by proxy, my sympathies are in a measure with the cultivators of the soil, and I feel a sufficient degree of interest in whatever pertains to the *improvement* of any branch of the great agricultural economy. That material advances have been made within the last few years in this most ancient and important of all the arts, I think, admits not of a doubt; and that the most considerable agent in effecting such a change, has been the prevalence of *mutual information* during this period, I hold to be alike unquestionable.

Entertaining opinions like these, it will not be thought strange if I feel an inclination to contribute *my* "*mite*," (if indeed I turn not out to be more *miteless* than the "widow,") towards the still further promotion of what has been by some denominated "book-farming." It is in compliance with such an inclination that I submit to your inspection the following items, the "raw material" of which I find in my "Farmers' Journal," If you deem them of consequence enough to merit a place in your columns, please to present them to your readers; if otherwise, give them a place among such other "crumbs" (unfit for "the dogs,") as you cast under your table, and pardon me for inflicting upon you the misery of giving them a bootless perusal.

Item First — Cutting Corn Fodder for Cattle. Having occasion, about the middle of November, 1836, to pass through your city, and stopping for an hour at Bement's Hotel, I had an accidental opportunity of witnessing the operation of a "Green's Straw Cutter;" and so well was I pleased at first sight with its execution, that I proceeded immediately to Thorburn's and made a purchase. Feeling a *little bit streaked*, as "Slickville" would say, after getting it home, lest some of the more "knowing ones" among my neighbors, should take it into their "bump of self-esteem" to underrate my wisdom in parting with "thirty round dollars for a little machine," which Sampson would have pocketed just in the way we common folks do a jack-knife, I made some haste to get it into effective operation, working up hay and straw for my horses, and stalks

for my cattle. Of this latter article, I had on hand the produce of some 4 1-2 acres, heavy growth, and I directed my man to prepare of it daily a quantity sufficient for the *keep* (your pardon Dr Webster,) of five cows; which quantity proved not to vary much from ten bushels, and occupied in the preparation from one to one and a half hours per day. On this allowance, with pretty uniformly a little oat straw in the yard at noon, my cows were kept until some time in April, when the supply was exhausted. I never wish to have my cows winter better. Of the fodder thus prepared, (cut simply, and neither brined, salted nor steamed,) and fed to them in mangers in their stalls, they consumed by measure, five parts out of six; the rejected portion consisting entirely of the largest *buts*. These were thrown daily into the yard, as refuse, a measure to be placed entirely to the score of mismanagement, for had they been left in the mangers, and the allowance shortened a little, I am since convinced, they would have totally disappeared.

At one and a half hours per day, for four months the time consumed in preparing the fodder amounts to seven and a half days; which at four shillings per day, will make the *expense of cutting* $5. The *saving in the fodder* cannot be fairly estimated at less than one-third of the whole, or the entire keeping of 1 2-3 cows (so "Colburn" cuts up cattle,) for four months. This being equal to the keeping of one cow for 6 2-3 months may be quickly set down at the current value of two tons of good hay, say $20. Clear profit, $15. But this is not all. The *improvement of the manure*, consequent on this mode of feeding the stalks, instead of casting them *whole* into the yard after the common practice, is of itself almost an equivalent for all the extra expense.

The 1st of December, 1837, I commenced in the same way, on the produce of four acres, (very heavy growth of the large Dutton,) except that I fed it to 20 two year olds. These had previously eaten no hay, and I instructed my man to keep them rather close for the first few days, in order to induce them to clear their mangers. In this I succeeded so completely, that at the end of feeding the stalks, I could say without hesitation, I did not believe, that of the whole supply, *a pound to the ton* had been wasted by *rejection*. From beginning to end, a single shovel full of leavings had not been removed from the mangers, and at the end, a shovel full could not have been obtained from them. These cattle were also allowed a little straw once a day in the yard. A short time previous to their commencing on the stalks, they were purchased in the neighborhood, at $17 1-2 per head. When they had finished them, some two months after, I could have readily sold the whole of them at $25 per head. Advance on their aggregate value, $150. I have not yet been laughed at for purchasing the Straw Cutter; and should I, by any accident, be deprived of the one I now have, I would run the risk of being laughed at, and pay $100 for another, could I not obtain it cheaper. I understand, however, that the price of the article is getting reduced, in which I very much rejoice, as I should like to see it introduced generally.

I should have remarked before, that my stalks are uniformly cut at the ground, which practice of course I fully approve. The largest buts are cut without difficulty, and in no way injure the knives of the cutter. These I have hitherto been under the necessity of sharpening no oftener than once in twelve months, though the amount of work done by them, in hay, straw and stalks, has amounted to not less than from ten to fifteen or twenty tons per year. To facilitate the operations of the machine, I annex to it a *false* apron for the purpose of receiving the stalks, the *true* one being of insufficient dimensions, and occasionally *clear the spaces between the knives*, with an instrument kept at hand for this purpose.

Perhaps, from what has been advanced above, I may be thought by some to have a *strong motive* for recommending "Green's Straw Cutter." I certainly have, sir; and an equally strong one for speaking in favor of any *other* cutter that will do the same execution, and consequently afford the same profit to the owner. The only inducement I have to say a word in favor of *any* machine of the kind, is to be found alone in the results of the above detailed experiments.

Item Second—A great Enemy to Corn, as many a desolated field of the last season can bear me witness, is the cut worm, or black grub. To prevent the depredations of this unwelcome visiter last spring, I caused each hill of my corn, immediately after planting, to receive a common handful of good live *ashes*, and another immediately after weeding. This proved however to present no obstacle to the progress of the enemy, and I soon discovered that my whole field was more than decimated, and the work of destruction advancing briskly. I therefore ordered my men, as a last resort to "prepare for *war*"—to "sharpen their finger ends," and set at once about exhuming the marauders. For several days it seemed as if "a whole procession came to each one's funeral," but at length victory wreathed the brow of perseverance; and the precaution having been taken to replace each foe dislodged with a suitable quantity of good seed corn, I soon had the pleasure to see my field restored, in a good measure, to its original order and beauty, there being seldom a vacancy in a piece of four acres. The latest planted came to maturity, (the white flint being the variety used for replanting,) and the produce of the field was estimated at 45 bushels to the acre. Had I not pursued the course above indicated, I am confident that the average of the crop would not have exceeded 30 bushels to the acre. By the process of "grubbing," then, I secured an increase, in the produce of the four acres, of 60 bushels of good sound corn. The time consumed in the operation was probably equal to about eight days. Eight times five Yankee shillings is $6, 67. Sixty bushels of corn at ninety cents per bushel, is $54. Difference, $47,33. From this deduct the further expenses of harvesting, &c. &c. (not forgetting, however, that the *stalks* are worth something,) and there will still be left a remainder well worth pocketing by any small farmer. I would therefore recommend it to "the profession," whenever annoyed by the above mentioned enemy, to "go and do likewise."

Item Third—"Doctoring" Fruit Trees. Very often does it happen that a valuable young fruit tree is sacrificed for want of a little "doctoring." Some time in the latter part of June last, a street-running cow, through the inadvertency of a lad on the premises, gained admission, just at evening, into my fruit-yard. Attracted by the appearance of a fine Bolmer plum tree, five years from the nursery, full of luxuriant foliage and young wood, and richly laden with its first offering of fruit, she made a rude attack upon it, broke it down to the ground, and before the mischief "got wind," succeeded in stripping it entirely of its young wood, one of its largest branches, and nearly all of its fruit. My vexation on discovering the accident was extreme. It was a favorite tree, and I had watched over its growth for years, with an unusual interest: it had now come forward into full bearing, and already had my "mouth watered" in anticipation of its exquisite fruit. But there lay my "castle," in pitiful ruins. I had no hope whatever of repairing the misfortune. So with a length of visage that bore no mean comparison with that of the luckless cow, I turned me away to comfort myself as well as I could with that wonderful nostrum "What cannot be cured, must still be endured." By the next morning, however, I had made up my mind to *attempt a cure*. "There is nothing like trying." I accordingly commenced by examining the wound. The tree was broken quite down, about two inches from the ground, and all that held the root and stock (or 'soul and body") together, was a thin slip of wood, not larger, to speak safely, than my smallest finger; and even from this, *the bark was severed* for nearly three inches. A pretty bad patient, surely; however, I proceeded, raised it up to a little more than a perpendicular position, and confined it firmly in different directions, by several thongs, made fast to stakes which I had driven for the purpose. By placing the tree in this position, I brought the bark into the closest possible contact with the slip from which it had been dissevered; and by confining it thus in different directions, prevented the winds from racking and twisting it, and frustrating my intention of reuniting the parts. I next proceeded to lay over the entire fracture a thorough coating of grafting wax, to exclude the *air*, and finished the operation by raising a cone of fresh clay loam, to the height of eighteen inches about the stock, to avert the influence of the *sun*, not only from the wax, but also from that part of the stock contiguous to the wound. To my surprise, I discovered within a week, that it was putting forth fresh leaves and new wood. This it continued to do, and even to *ripen a number of plums*, which I had left upon its mutilated branches. At length by the middle of October, I had the pleasure to see its new wood pushed, in numerous instances, to the length of six or eight inches, and to *taste of its fruit completely matured*. Having taken the further precaution to give it another good dressing of loam, I am now fully confident that it will outlive the winter, and another spring "go on its way rejoicing."

Item Fourth—A peep at Root Culture. On the 18th day of October last, I took from 108 feet of ground, in my garden, 7 1-2 bushels, large measure, of mangold wurtzel, being at the rate of 3,025 bushels to the acre; and from 90 feet, four bushels of carrots, being at the rate of 1,936 bushels to the acre. This teaches me what I, J, K, or any body else, *might* do on a larger scale. Respectfully,

ASAHEL FOOTE.

CONSIDERATE HUMANITY. It is stated in the Baltimore Sun that the late Isaac McKim, has made provision for the continuance of his copper mill and his shipping interest to a certain remote period, which will enable many an honest man in his employ, to be continued in his honest labor without being thrown on the world at a moment's notice.

A farmer in the northern part of Scotland some forty years ago, when turnip culture was beginning to creep into the country, sowed a head ridge *for the use of the public*; and put up a label with this inscription.—"*You are requested to steal out of this spot.*"—*Quarterly Journal of Agriculture.*

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

BOSTON, WEDNESDAY, FEBRUARY 27, 1839.

AGRICULTURAL MEETING.

The fifth agricultural meeting was holden on Thursday evening last, and was as well attended as any former one, showing an undiminished interest in agricultural inquiry and improvement. The Hon. Mr Thaxter of the Council was in the chair.

The subject previously announced for discussion was MANURES, but as a gentleman from the interior, not a member of the Legislature as has been stated, but a mere visiter to the city, was present and would not be present at the succeeding meeting, it was deemed best, with the consent of the meeting to suspend the subject of manures and take up the subject of silk, with which the gentleman referred to, Mr Smith of Amherst, was perhaps as practically familiar as any farmer in the state. Much interesting information was expected from him and the meeting were not disappointed. In a sensible, intelligent and plain manner he detailed fully his own experience in the culture of silk, gave his views of the probable future progress, success, and profits of the business; and replied to various inquiries, which several gentlemen saw fit to propose to him. He was followed by the Rev. Mr Field of Charlemont, a member of the house, who at the request of the chair, obliged the meeting by a detail of his notions and experience.

Mr Smith began the business of the silk culture in 1831 and then purchased one ounce of mulberry seed. He has used seven or eight different varieties of worms and has fed from most of the different kinds of trees.

He expressed a diffidence in giving his opinion of the different sorts of mulberry; but it was quite apparent that he thought the morus multicaulis unsuited to our climate; and preferred to all others the Canton, the seeds of which he procured from Dr Stebbins of Northampton, who obtained them through the missionaries, who had penetrated into the hilly country of Pekin where they procured this seed. This tree is easily propagated by cuttings; its foliage is large and sub-tantial; and it has suffered very little from the winter. The white mulberry will make as good silk as any feed which can be given to the worms; and the only objection is the smallness of the leaves and the consequent increased labor in collecting them. To the question whether he could collect more weight of foliage from the morus multicaulis than from other trees, he replied that he could collect 30 lbs from the morus multicaulis or the Canton, when he could get only 10 lbs from the white mulberry. He was not familiar with the Broussa which he deemed only a variety of the white mulberry, of much value though its leaves were comparatively small, and it could be propagated only from seed. He pronounced the Alpine a highly valuable tree; but he stated that it was the result merely of a selection of the best plants for size and beauty of foliage from great numbers raised from the Canton or Asiatic seed, and that the name of Alpine is wholly an arbirtary designation of the best plants and not the designation of any new kind. He considers the morus multicaulis as furnishing from its very rapid growth in our latitude a leaf which contains too much water, and was liable to produce disease in the worms. He says his own experience and observation have taught him that the worm requires a difference in the nature of its feed according to its age. At its first coming out it needs a very tender leaf; and as it advances it requires a leaf much more substantial; that in short its appetite and wants correspond to the progress of vegetation in the tree, the leaves at first being tender and acquiring in their progress to maturity more and more substance. He purchased at one time the multicaulis plants to the amount of 475 dollars, but they would not answer his purposes. They could not be left out in the ground in winter and he had lost many of them in the cellar. He prefers to set his trees in hedge rows or clumps, keeping them low and not suffer them to become standard trees. He thinks the best mode of gathering the leaves of the white mulberry is to cut the tops and then pick off the leaves; but there is danger of destroying the young worms if too much foliage was laid upon them. He considers it an easy and interesting labor for females and young persons.

The silk worm has five ages and periods of moulting; after the last moulting the worm requires 4-5ths of his whole feed. When begun to be fed he should be fed with the young leaf. Every day's hatching is to be kept by itself, and the worms are not to be fed on the fourth day of their lives. He thinks that there is no injury accruing from giving his worms wet leaves. They must not be fed with leaves that have been heated, but he deems it oftentimes of use to give the worms wet leaves and with that view very often sprinkles his leaves with a pailful of water to 100 lbs of leaves. Too dry a room is injurious to the worm. He does not hesitate to give them wet leaves in all stages of their growth.

He says that many losses occur from covering the worms too closely when they are young; and that every day's hatching should be kept by itself.

In speaking of the profits of the business he says that in 1837 he employed young women from Mansfield to whom he paid three dollars per week. They raised and reeled twentythree pounds. The time occupied was nine weeks. The wages paid were fortyeight dollars. The bounty received from the state was thirtytwo dollars.

One pound of silk may be got from 3000 worms of the yellow kind, if well fed. Of the white cocoons 5000 are required to a pound; and their work is completed in four weeks.

The best time to hatch the worms is determined by the condition of the feed. He advises to a hatching once in ten days. The hatching may be kept back by keeping the eggs in an ice cellar on the ice. Mr Smith has confidence that if the eggs can be subjected to the action of frost by any artificial means they may be hatched the same season they are laid.

The great dangers to the worms in the silk room are from red ants, and mice, and rats. Against the latter depredators the cat is the only security. Against the ants he uses chloride of lime and quick lime spread round the stands.

Rev. Mr Field of Charlemont has been ten years engaged in the culture of silk. He tried the Canton mulberry, but they perished in the winter. Mr Smith says he probably had the seed of 1834, which came from a different part of China from that to which he refers.

Mr Field confines himself to the white mulberry, which he believes will prove as valuable as any for our use and climate. The setting of the plants is a matter of importance. They should be so placed that the ground can be cultivated and manured. If the soil is well cultivated and enriched the leaf of the white mulberry will be very much increased in size. He advises to placing them in rows twenty feet apart; and the plants four or five feet apart in the rows. In his experience the labor of one hand five or six weeks will produce and prepare nine or ten lbs. of silk, which will give not much less than one hundred dollars.

Mr Field has never ventured to give his worms wet leaves under the common apprehension that they would be injurious or fatal.

We have given this rough and miscellaneous detail of the remarks of these gentlemen who have had several years experience on a subject which is now every where exciting great and deserved attention. When the mulberry tree fever has somewhat abated and men have come to their sober senses and the cultivators of silk take the field in place of the jockies and speculators in mulberry trees, bass wood cuttings, sago, &c. &c. we may expect this great business will advance with all reasonable success and profit. There will undoubtedly be many disappointments; and those farmers, who expect in two or three years to hold their ploughs in silk gloves and those housewives, who are calculating to wipe their dishes with silken towels, will we think find themselves in an error. But we verily believe that to a certain extent and in a domestic way the business will be highly productive and furnish employment and subsistence to many women, children and aged persons who might otherwise find it not so easy to occupy their time usefully or earn their daily bread. We believe that it is destined to be a great interest of the country; and that the soil, and climate, and habits of New England are adapted to produce the article in abundance and of a superior quality. The subject of manures was afterwards briefly alluded to: but as the time was far spent, it was agreed to postpone the further discussion to the next meeting, to be holden on Thursday next at the usual time and place.

To an inquiry whether it were advisable to continue these meetings, there was a unanimous affirmation; and a suggestion on the part of some that they should be holden twice instead of once a week. H. C.

THE WAR BREEZE.

Farmer U. S. and Farmer J. B., whose farms are adjoining, have for some time been disputing about the right to a piece of land lying between them; and as to the place where the line should run. They left it to an umpire to determine the line according to the deeds; but he, too indolent to examine the claims, took his pencil and drew an arbitrary line on the plan, which satisfied neither party. They have since that time been trying hard by civil negotiation, in the only proper way for reasonable men and gentlemen to adjust the controversy. In the mean time it would seem but reasonable that no encroachments should be made on the land by either party but that it should remain untouched that the interests of neither party should be prejudiced. But it seems some scoundrel thieves belonging it is said to farmer B. but probably of both parties, certainly however not with the countenance of either, have undertaken to plunder the timber and produce. This kindles the ire of farmer S. He holds a secret council in his family and goes down by force and arms to drive these trespassers from the ground and to take violent possession of the disputed ground, without giving his neighbor B the smallest intimation of his designs. He then raises a war cry and rouses his family and all his neighbors by the thunders of his indignation and proceeds in battle array to take possession if he can get it, of the piece of land in controversy. Now there is no complaint against the good temper or good disposition of farmer B; and a very serious question arises, whether this is really the most likely and the best way to settle this business?

In plain English, Maine has declared war against Great Britain; has summoned her troops into the field, and now with ten thousand men is marching against the British. The British on the other side are collecting their forces and perhaps before the ink of this sheet is dry, a collision may have taken place and human blood be shed. When this occurs God only knows where it may end. When a fire is kindled in a dry stubble, or a combustible neighborhood, who can say where it shall reach or how it shall be put out.

A good many serious questions and considerations arise out of this matter. Has Maine a right to declare war and by her own acts involve the whole country in a bloody conflict?

Will England submit to have the territory taken from her by force; and will she be more likely to negotiate at

the point of the bayonet than with peaceable remonstrance? Suppose we should get full possession of the territory in dispute, does that settle the matter?

Suppose we come into conflict with the British troops, and kindle the horrible fire of war, will it not at once extend along the whole line and produce a general conflagration, and fill the borders of the two countries with outrage, carnage and murder?

Would the possession of all Upper and Lower Canada and the provinces of Nova Scotia and New Brunswick be the tenth part of an equivalent for the expense, and bloodshed and misery of even a three years war with England?

War is a game at which two parties play. What a pity it is that those, who move the men on the chess board should not themselves be the men to be moved; and that they who declare the war should not be compelled to do the fighting; and that Governor Fairfield and his brave legislators should not be ordered at once to march through the deep morasses up to their knees in clay and mud; sleep in the pine swamps night after night, live upon raw pork; leave their comfortable homes and families, neglect their farms, and then stand in the front rank to be shot at or bayonetted for eight dollars a month!

Worse than all this, how horrible is it that two neigboring nations, enlightened, moral, prosperous, christian nations, should go to killing each other and spreading a flood of scalding misery among the people, opening a volcano and pouring out torrents of burning lava over peaceful villages, all for what? for the settlement of a dispute already in the train of negotiation about a parcel of wild land. Alas, is there no hope for human nature!

H. C.

NOTICE.—A stated meeting of the Massachusetts Horticultural Society, will be holden at its rooms in Tremont Street, on Saturday, March 2d, at 11 A. M.

E WESTON, Jr., Recording Secretary.

February 26, 1839.

BRIGHTON MARKET.—MONDAY, Feb. 25, 1839.

Reported for the New England Farmer.

At Market, 420 Beef Cattle, 8 pair working Oxen, 15 Cows and Calves and 1200 Sheep. 120 Beef Cattle unsold.

PRICES.—*Beef Cattle.*—In consequence of the storm, and the large number at market, former prices were not sustained; sales were very unequal and, on some qualities the decline was considerable. We quote First quality, $8 00 a $8 25. Second quality, $7 25 a $7 75. Third quality, $6 00 a $7 00.

Working Oxen—We notice sales at $94, $110, and $125.

Cows and Calves.—Sales were made at $35, 42, $50, $65, $70, and $80.

Sheep.—Dull. Lots were sold at $3 25, $4 00, $4 25, $4 75, $5 50, and $6 50

Swine.—None at market and not in demand.

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded northerly exposure, week ending February 24.

FEBRUARY, 1839.		7 A.M.	12, M.	5, P.M.	Wind.
Monday,	18	28	32	30	N.
Tuesday,	19	20	31	28	N.
Wednesday,	20	30	44	34	N. W.
Thursday,	21	30	40	36	N. E.
Friday,	22	32	38	34	N. E.
Saturday,	23	32	34	32	N.
Sunday,	24	32	44	36	N. E.

WANTS A SITUATION.

A Gardener who understands the management of a Green House, Hot Beds, &c. has had long experience in the business, and can produce the best recommendations. Apply at the New England Farmer Office.

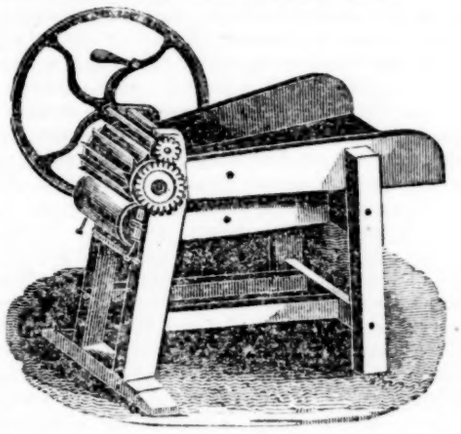
Feb 27. JOSEPH BRECK & CO.

FARM IN GROTON FOR SALE.

The subscriber offers for sale, his farm in Groton, Mass., consisting of about 200 acres, much of it first rate land, and in a highly cultivated and productive condition. There are two dwelling houses, and commodious barns, and the place may easily be divided into two good farms. It is well stocked with fruit; with an abundance of fuel for use and sale, and excellent water. It is difficult to find a place combining more advantages in respect to comfort or profit. It will be sold on eligible terms. Inquire at the N. E. Farmer Office or of the subscriber on the premises.

Feb. 13, 1839. WILLIAM SALISBURY.

GREEN'S PATENT STRAW CUTTER.



JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store, Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it very efficiently.

2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.

3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.

4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.

FOR SALE.

The farm belonging to the estate of the late Jotham Bush, situated in the centre of Boylston, 7 miles from Worcester, containing about 125 acres of land, part of which is in a high state of cultivation, mostly fenced with stone wall and supplied with never failing water. The house is spacious, elegant and commodious, with two wells of superior and never failing water. The situation is not surpassed by any in the vicinity. The barns are large and in good repair. About 25 tons of first quality hay, the grain stock, and farming utensils will be sold with the farm, if wanted by the purchaser. Also, the outlands, a mile distant, may be purchased with the homestead, if desired; consisting of about 125 acres of choice intervale, plain, and wood land, situated by the Nashua river. For further particulars, inquire of Thomas Bond, Esq. of Springfield, John W. Bush of Hardwick, or of the subscriber on the premises. JOTHAM BUSH.

Boylston, Feb. 13, 1839. 3w

AMERICAN SILK GROWER'S GUIDE.

On the art of raising the mulberry and silk and the system of successive crops in each season; second edition; enlarged and improved by William Kenrick. Just published and for sale by Joseph Breck & Co., at the Seed Store and Agricultural Warehouse, Nos. 51 and 52 North Market Street.

Jan 9, 1839.

BONE MANURE.

The subscriber desires to inform his friends and the public that he has been in the Bone business more than ten years, and has spent much time and money to ascertain how bones may be converted to the best use, and is fully satisfied that they form the most powerful stimulant that can be applied to the earth as a manure. He offers for sale ground bone at a low price, and is ready to receive orders to any amount, which will be promptly attended to.

Orders may be left at my manufactory, near Tremont road, in Roxbury, or at the New England Agricultural Warehouse and Seed Store, No. 52 North Market Street, Boston.

Sept. 20. NAHUM WARD.

A BOAR FOR SALE.

The Subscribers are authorized to sell a boar, half *Berkshire;* he is large of his age, being twenty months old. Price $75. Apply to

Feb. 6. ep JOSEPH BRECK & CO.

MULBERRY SEED.

Brussa Mulberry Seed, fresh and warranted good, for sale by ROBERT G. SHAW & Co.

Feb. 20. 51 *Commercial Wharf.*

PRICES OF COUNTRY PRODUCE.

CORRECTED WITH GREAT CARE, WEEKLY.

		FROM	TO
ASHES, Pearl, per 100 lbs.		7 62	7 87
Pot, " " "		6 00	6 12
BEANS, white, Foreign,	bushel	1 35	1 75
" " Domestic,	"	2 00	2 50
BEEF, mess,	barrel	17 00	17 50
No. 1,	"	14 50	15 00
prime,	"	12 00	12 50
BEESWAX, white,	pound	35	38
yellow,	"	28	30
CHEESE, new milk,	"	8	10
BONE MANURE,	bushel		35
in casks,	"		40
FEATHERS, northern, geese,	pound		
southern, geese,	"	37	46
FLAX, (American)	"	9	12
FISH, Cod, Grand Bank,	quintal		4 00
Haddock,	"		2 25
MACKEREL, No. 1,	barrel	13 00	13 50
FLOUR, Genesee, cash,	"	9 12	9 25
Baltimore, Howard street,	"	8 87	9 00
Richmond canal,	"	8 75	8 87
Alexandria wharf,	"		8 50
Rye,	"		5 50
MEAL, Indian, in bbls.	"	4 00	4 50
GRAIN: Corn, northern yellow,	bushel	95	97
southern flat, yellow,	"	92	93
white,	"	90	
Rye, northern,	"		1 25
Barley,	"	90	95
Oats, northern, (prime)	"	56	58
HAY, best English, per ton,		18 00	19 00
Eastern screwed,		16 00	17 00
HOPS, 1st quality,	pound		16
2d quality,	"	13	14
LARD, Boston, 1st sort,	"		
southern, 1st sort,	"	11	12
LEATHER, Philadelphia city tannage,	"	29	30
do. country do.	"	25	27
Baltimore city tannage,	"	26	28
do. dry hides,	"	24	25
New York red, light,	"	23	25
Boston, do. slaughter,	"	23	24
Boston dry hides,	"	21	23
LIME, best sort,	cask	90	95
OIL, Sperm, Spring and Summer,	gallon		
Winter,	"	1 08	1 10
Whale, refined,	"	50	60
PLASTER PARIS, per ton of 2200 lbs.			3 25
PORK, extra clear,	barrel	26 00	27 00
clear,	"	24 00	25 50
Mess,	"	23 00	24 00
SEEDS: Herd's Grass,	bushel	2 75	3 00
Red Top, southern,	"	80	1 00
northern,	"		
Canary,	"	1 50	1 75
Hemp,	"	2 62	3 00
Flax,	"	1 75	1 87
Red Clover, northern,	pound		
Southern Clover,	"		
SOAP, American, No. 1,	"	6	7
" No. 2,	"	5	6
TALLOW, tried,	"	12	13
TEAZLES, 1st sort,	pr M.	3 00	3 50
WOOL, prime, or Saxony Fleeces,	pound	57	62
American, full blood, washed,	"	52	55
do. 3-4ths do.	"	47	50
do. 1-2 do.	"	42	45
do. 1-4 and common,	"	37	40
Northern pulled. Pulled superfine,	"	52	55
No. 1,	"	47	50
No. 2,	"	30	35
No. 3,	"		

PROVISION MARKET.

RETAIL PRICES.

HAMS, northern,	pound	14	15
southern and western,	"	12	13
PORK, whole hogs,	"	10	11
POULTRY, per lb.,	"	14	16
BUTTER, tub,	"	18	25
lump,	"	25	30
EGGS,	dozen	16	18
POTATOES, Chenango,	bushel		62
white,	"		50
APPLES, Baldwin's	barrel	3 00	3 00
Russetts,	"		2 50
CIDER,	"	3 00	3 25
refined,	"	4 50	5 00

SCIONS OF FRUIT TREES.

Scions of a great variety of Apples, Pears, Plums, and Cherries, from bearing Trees, which have been proved at the Pomological Garden, Salem, Mass., for sale by the subscriber. ROBERT MANNING.

Feb. 6. 6p

MISCELLANEOUS.

WHAT A FARMER WANTS.

The Farmer wants a stable mind,
A purpose sure and steady,
To patient industry inclined—
For business always ready.

Good careful habits well infixed,
And judgment acting clearly,
To sift out truths with error mixed,
Though it should cost him dearly.

He wants a neat and prudent wife,
Who when he earns, can save it;
Who kindly soothes the care of life,
(Best gift of him who gave it.)

He wants a snug and tidy farm,
And health and strength together;
A house and barn to keep all warm
In cold and rainy weather.

Heaven's blessing then must crown the whole.
Or all his hopes are blasted;
But with this resting on his soul,
The purest joys are tasted.

He then enjoys a bliss, unknown
To those the world calls greatest;
Known only to the good alone,
The earliest and the latest.

(From Dr Humphrey's Tour.)

THAMES TUNNEL. The great want of a thoroughfare across the Thames, somewhere between London Bridge and Greenwich Hospital, suggested the idea of a *Tunnel*, under the bed of the river, which was commenced several years ago, about midway between the two. From various adverse causes it has advanced but slowly and irregularly; and it was not when I visited it, more than half completed. Two or three times, the superincumbent waters have broken through, to the great discouragement of the company, and even threatening to put a final stop to the enterprise. But by great labor and expense, the breaches were stopped, and the water was pumped out.

It is agreed on all hands, that if this immense work could be finished and secured against the irruptions of the river, it would be a great convenience, as the navigation of the Thames will not permit the erection of a bridge in that part of the city; and the river is so constantly choaked up with all kinds of water craft, that to keep a ferry open would be quite impossible. When the work was first undertaken, it was regarded by many as visionary and impracticable; and the hopes of the most sanguine were nearly annihilated by the first cataract, which drove out the terrified workmen, and in a few minutes filled up the vast excavation. The undertaking has proved much more costly than was anticipated, and for a very considerable time the work was suspended entirely for want of funds. But at the last session of Parliament, a handsome grant was made to help carry it forward, and when I was there, the long arches again resounded with the heavy blows, and busy hum of the workmen.

You can see the *Tunnel* as you see every thing else in England, whether finished, unfinished or in ruins, by paying your shilling, more or less, at the gate, and buying a guide book at twice its value—though the latter condition is not quite imperative. A shaft is sunk to the depth of fifty or sixty feet, on the south bank of the river, over which a temporary building has been erected, and you descend into the Tunnel by a winding staircase. Before it can be opened, the excavation must of course, be carried out a great deal further from the river, to get a convenient slope for heavy transportation. At the bottom of the stairs the Tunnel commences. It is ten or twelve feet in height, and wide enough for two carriage ways, and side walks, and separated by a row of massive pillars and arches. The sides and transverse arches, as you stand at the entrance, and by the help of lamps, look down these subterranean galleries, being built of the most substantial masonry, have every appearance of being perfectly secure, as far as they are finished, which is about 600 feet, nearly or quite to the middle of the river. Some even now doubt, whether this Tunnel will ever be finished; but I can see no insuperable difficulty in the way. As I have elsewhere remarked, our English kinsfolk are commonly much less in a *hurry* than we are; but they possess the virtue of perseverance in an eminent degree; and I have little doubt that some half a dozen years hence, they will be passing under the bed of their largest river with as much composure and safety as they now pass over London bridge. Whenever that arrives, the Tunnel will be of immense value to the lower part of the Metropolis.

It does not follow, as I am quite well advised, that, because every American who visits London finds a great many things to admire, or to marvel at, he can put them down upon paper so as to make them equally interesting to his countrymen at home. But I have ventured just to mention some half dozen of these trifles as specimens of the thousand *nugæ* which arrest your attention in your daily perambulations of that vast Metropolis.

THE DRAY HORSES of London are animals of prodigious size and power. They resemble elephants, more than they do the ordinary breed of horses in the country. A gentleman told me he had three of them, that were worth at least a hundred pounds, that is about *five hundred dollars*, apiece. The best of these noble animals, especially those owned by the great brewers, are worth even more than this. How lamentable that they should be unconsciously employed in the distribution of poison to so many thousands of families! This leads me to say, that some of the breweries in London are immense establishments. In their vats a strong swimmer might find abundant room to tire himself. I shudder when I contemplate the probability that a single one of them will destroy more thousands, than fell in both the battles of Austerlitz and Waterloo. When will the governments and people of Great Britain and the United States be convinced, that it is as bad at least to kill a hundred men with strong drink, as to take the life of one man with a pistol or a dagger? How will posterity wonder at the obtuseness of our moral sensibilities in regard to the making and vending of alcoholic poison! Let but the meanest citizen of either country be murdered in cold blood, and you shall see the whole community roused as one man, to pursue and bring the criminal to justice; but let thousands perish under the slow tortures of intoxicating drinks, and where is the *posse comitatus* to arrest those who sold them the deadly poison? Where is even the public opinion, which effectually frowns upon the trade of dealing out "death and damnation" to the high and the low, the rich and the poor?

THE POLICE of London is very numerous and extremely well organized. This useful corps, amounting, if I was rightly informed, to four thousand or more, are found in the streets at all hours of the day, as well as the night. They are distinguished by a plain blue uniform, with a little trimming upon the collar. You meet them at every turn, and judging from my own experience, they are very civil to strangers. As I often found it difficult to make my way from one part of this vast city to another, I soon learned to inquire of the first *police man* I met, as I was quite sure he would be both able and willing to direct me. If you speak to any other person whom you happen to meet he may be as much of a stranger as yourself. And if you step into the nearest shop you may, or may not, obtain the information you want. I ought to say, however, that if those whom you address, *can* address you, they will. I very rarely received a short and gruff answer—and not unfrequently would the person spoken to, insist upon going with me into the street, or to the next corner, to make his directions more definite. Such attentions in the midst of an immense and bewildering city you cannot but appreciate and remember. You have a map, it is true, and you can, if you will, study it so as to get a tolerably correct notion of all the principal streets and squares of the town,—but I never could have patience to sit down and find the place wanted, just as I was going out to meet an engagement—and then, one half the courts and cross streets are not to be found upon the map at all. There is nothing which cools the wrath of coachmen, carmen, and omnibus drivers, so effectually, when they find themselves jammed together, pell-mell, in Cheap-side, or Black-friars, and begin to vociferate, and brandish their long whips—nothing brings down their high temper, like the appearance of a police man: "Do *you* stop there, and do *you* turn a little to the right, and *you* a little to the left, and *you*, sir, go with me to the office yonder." Thus he clears away every obstruction almost in a moment, and the waves roll on as before.

TO BE LET.

The subscriber offers to lease for the term of three, five or seven years, his dwelling house and gardens in South Salem, either with, or without any portion of the adjoining farm lands. The gardens, &c. contain about six acres, in a high state of cultivation, well stocked with flowers, fruit and ornamental trees; two green houses, filled with the choicest green house plants, and grapes in full bearing; a forcing wall, with seed and tool rooms, a convenient gardener's lodge, and a large ice house; sufficient may be sold annually from the garden to pay the whole rent. The dwelling house is large and convenient, commanding a fine view of the sea, and is within three fourths of a mile from the centre of the city of Salem. The above offers a desirable situation either for a gentleman's residence, or for a public garden or boarding house.

Also, to let for three, five or seven years, the farm house and barns, which are large and commodious, with the whole or part of the farm, consisting of over two hundred acres of land of the best quality, with a large orchard of grafted fruit—it is abundantly supplied with sea manure, and located near four market towns. The whole estate has a full supply of pure water. Apply to the subscriber on the premises.

Jan. 23, 1839. E. HERSY DERBY.

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